



Product Evaluation

LVR19 | 0818

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: LVR-19

Effective Date: August 1, 2018

Re-evaluation Date: August 2022

Product Name: Model ECD-545-MD Extruded Aluminum Louvers, Impact Resistant

Manufacturer: PCI Industries, Inc.
5101 Blue Mound Rd.
Ft Worth, TX 76106
(423) 698-7715

General Description:

The ECD-545-MD extruded aluminum louver is engineered and tested to withstand extreme loads, debris impact and cyclic fatigue failure associated with the severe weather effects of hurricanes. Constructed from 6063-T5 extruded aluminum the ECD-545 MD's unique load-bearing design accommodates installations of unlimited width or height and single section assemblies up to 60" x 144" without adding costly intermediate structural support required by other products.

Limitations:

Design Drawing:

- "Aluminum Louver System Model ECD-545;" manufactured by PCI Industries, Inc.; Drawing No. ECD-545-MD TDI; Sheets 1-19 of 19; dated June 2, 2017; signed, sealed, and dated July 24, 2017 by Gustave L. Schmoll, P.E. The stated drawings will be referred to as approved drawings in this report.

Configurations:

- Single Units
- Multi-section wide and high louver systems are allowable provided the individual sections are supported per the details on the drawing and a suitable support structure is analyzed and approved by a Texas licensed professional engineer.

Mounting Conditions:

- Wall Mount

Wall Construction: The louvers may be mounted to the following types of wall framing:

- Concrete, (minimum compressive strength – 2,000 psi)
- Grout-filled concrete masonry units (CMU) – 1500 psi
- Wood (minimum Hem Fir Lumber, S.G. = 0.43)
- Steel (minimum 1/8" thick, ASTM A500, A653, or A36)

Allowable Design Pressure: The allowable design pressure is a function of mullion construction, mullion spacing, mullion span, mullion connections, and substrate. The maximum allowable design pressure is +/- 150.0 psf. Refer to the approved drawings for the allowable design pressure for a specific installation condition.

Maximum Width: The maximum width of a louver panel unit is 5'-0". Louver panel units may be placed side by side utilizing mullions to achieve an unlimited overall width.

Maximum Height: The maximum height of a louver panel unit is 12'-0". Louver panel units may be stacked to achieve an opening height. For such conditions, the maximum overall height is a function of design pressure, panel width, and mullion span. Refer to the approved drawings for the maximum allowable height.

Product Identification: The louvers must have a manufacturer-produced label that indicates the manufacturer: "PCI Industries, Inc."; the name of the product: "ECD-545-MD"; the missile level: Large Missile; and compliance with TAS-201, TAS-202, and TAS-203.

Impact Resistance: This louver assembly satisfies the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The assembly has passed a missile test equivalent to Missile Level D specified in ASTM E 1996. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded.

Installation:

General Installation Requirements: The louvers must be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report. Copies of the approved drawings must be available on the jobsite during inspection of the louver assembly.

Anchorage: The louver must be anchored to the structure in accordance with the approved drawings. Anchorage of the louvers to concrete, grout-filled concrete masonry units (CMU), wood wall framing, and steel wall framing must follow the mounting conditions, fastener options, and fastener placement specified on the approved drawings.

Note: Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.